

fixed amount; in a word, that the *zone maniable* in a given quantity of air is fixed for each anæsthetic. In the dog, 37 grains of ether are needed for each 100 litres of air to cause anæsthesia, and 74 grains to cause death; if chloroform is employed, the figures are 15 and 30 grains; if amylene, 30 and 55 grains; if bromide of ethyl, 22 and 45 grains; and if the gas chloride of methyl, 21 and 42 cubic centimetres are required for 100 cubic centimetres of air. It follows from this that the *zone maniable* varies from the single to the double to cause anæsthesia or death.

In the usual method of inducing anæsthesia with the saturated compress or the sponge, we always play, so to speak, with a mortal dose. When we bring the compress from 3 to 6 centimetres of the face the result just varies between the single and the double. How much better to so regulate the operation as to administer a dose corresponding to the medium figure of the *zone maniable*. In the dog, if we give at once 45 grains of ether, inspired in 100 litres of pure air, anæsthesia is produced at once without accident, and the sleep lasts for a long time. It is, therefore, not necessary to say that 30 or 50 grains of an anæsthetic were used during an operation; these figures signify absolutely nothing, since it is not the absolute quantity that is important, but the tension of the vapor of the anæsthetic in the inspired air, and consequently the quantity contained in the blood.

The practical application of the above is clear. If the limits of the *zone maniable* of an anæsthetic be known for man, it will be enough to lay aside all fears of asphyxia, and to cause to be inspired a mixture perfectly adapted and prepared in advance in any recipient whatever.

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PHOSPHIDE OF ZINC IN LOCOMOTOR ATAXY.—Dr. Hastings Burroughs (*Medical Press and Circular*, February 9, 1881) gives this drug in one-eighth-grain pills, one a day for a week, and then two daily, and so on up to five. He has treated his cases successfully thus far. *Phila. Med. Times*, March 12th.

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ALCOHOL.—Dr. M. Dumouly, *Brochure*, Paris, 1880, from experiments performed under the inspiration of MM. Sée and Bochefontaine, at the laboratory of the medical clinic of the Hotel Dieu (abstr. in *La France Médicale*), concludes that alcohol in small doses aids digestion, while in larger quantity it hinders it. It is not an aliment but a *substance d'épargne*, a waste-

decreasing agent. It accelerates the respiration, and, with large doses, causes a slight acceleration of the pulse. In moderate doses it is a stimulant, in large ones a depressant, to the nervous system.

As regards its action on the temperature, alcohol in very large doses causes a considerable reduction ; in small doses, exceeding twelve grains, the reduction is only some tenths of a degree Centigrade, this temporary effect being in no measure influenced by digestion. In very small doses, between six and eleven grains, M. Dumouly obtained a rise of two- or three-tenths of a degree. Below six grains there was no appreciable effect. Curiously enough, the dose of twelve grains seemed to be intermediate, and gave rise to no effect whatever.

In point of view of pathology and therapeutics, alcohol acts in pyrexias as a stimulant ; it is a powerful remedy against delirium and adynamia. Large doses (thirty grains of pure alcohol) produce in fever cases a slight refrigeration of a few tenths of a degree. This effect is transitory ; its maximum occurs in an hour and a half, and it is completely over in three hours. Divided doses do not have this temporary effect. The action of alcohol on the pulse is very slight. Large doses fail to produce intoxication in the febrile patient, while they surely have this effect on the healthy individual.

*En résumé*, if alcohol has any effect in fever, it is not as an antipyretic, as is generally thought to be the case.

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NERVE-STRETCHING.—M. Quinquaud reported to the Société de Biologie, Mar. 12th (abstract in *Gaz. des Hôpitaux*, No. 32), that he had observed a certain number of facts that indicated that the therapeutic effects sought for can only be obtained when there is produced a complete anæsthesia of the whole limb supplied by the nerve ; that it succeeds only when this anæsthesia is persistent, and, finally, that the principal indication for nerve-stretching is neuralgia.

Next, taking up the subject histologically, he asked what was the process taking place in the elongated nerves ? There is, first, according to him, a dynamic action ; an irritation of the nerve itself or of the cord.

When the anæsthesia obtained is only temporary there is no lesion of the stretched nerve. When it is persistent there is a secondary degeneration of the nerve. This is an incontestable